

LISTING OF THE CLAIMS

1. (currently amended) A biatrial triple-chamber ~~cardiac~~ pacemaker for use with a heart having a first and a second atrium and a first and a second ventricle, said pacemaker comprising :
[[-]] at least one sensing unit for sense events of the a first atrium and the first a-ventricle of a heart and
[[-]] at least one stimulation unit which is adapted to produce stimulation pulses to the a second atrium and the first ventricle [[,]] ; and
[[-]] a control unit [[-]] which is connected to the sensing unit and the stimulation unit and which [[-]] is adapted to evaluate, for actuating the stimulation unit, at least the atrial sense events (A_R-Sense) associated with the first atrium and the ventricular sense events (V-Sense) associated with the first ventricle; ~~for actuation of the stimulation unit~~;
[[-]] wherein the stimulation unit is actuated with ~~actuation is effected~~ having regard to a ventricular escape interval and a postatrial ventricular blanking time ~~in such a way that an occurrence of the~~ atrial sense event (A_R-Sense) triggers the ventricular escape interval, at the end of which a ventricular stimulation pulse is triggered if same is not inhibited by an occurrence of the a ventricular sense event within the ventricular escape interval and outside the postatrial ventricular blanking time,
[[-]] wherein the stimulation unit is actuated with ~~actuation is further effected~~ having regard to an interatrial conduction time ~~in such a way that an occurrence of the~~ atrial sense event (A_R-Sense) triggers the interatrial conduction time, at the end of which a ~~left atrial~~ stimulation pulse to the second atrium is triggered if the ~~left atrial~~ stimulation pulse to the second atrium is not inhibited, and
wherein the stimulation unit is actuated ~~characterised in that actuation is further effected in such a way that the delivery of a left atrial stimulation pulse to the second atrium is suppressed~~ [[- if]] when previously an occurrence of the a ventricular sense event occurs in a crosstalk window which adjoins a postatrial ventricular blanking time and at the same time a time interval from the distance in respect of time to the last occurrence of the ventricular event ascertained outside a crosstalk window, to the next possible ventricular stimulation event, is greater than a predetermined maximum value.

2. (currently amended) A biatrial triple-chamber cardiac pacemaker ~~as set forth in the classifying portion of claim 1~~ for use with a heart having a first and a second atrium and a first and a second ventricle, said pacemaker comprising:

at least one sensing unit for sense events of the first atrium and the first ventricle;

at least one stimulation unit which is adapted to produce stimulation pulses to the second atrium and the first ventricle; and

a control unit which is connected to the sensing unit and the stimulation unit and which is adapted to evaluate, for actuating the stimulation unit, at least the atrial sense events (A_R-Sense) associated with the first atrium and the ventricular sense events (V-Sense) associated with the first ventricle;

wherein the stimulation unit is actuated with regard to a ventricular escape interval and a postatrial ventricular blanking time such that an occurrence of the atrial sense event (A_R-Sense) triggers the ventricular escape interval, at the end of which a ventricular stimulation pulse is triggered if same is not inhibited by an occurrence of the a ventricular sense event within the ventricular escape interval and outside the postatrial ventricular blanking time;

wherein the stimulation unit is actuated with regard to an interatrial conduction time such that an occurrence of the atrial sense event (A_R-Sense) triggers the interatrial conduction time, at the end of which a stimulation pulse to the second atrium is triggered if the stimulation pulse to the second atrium is not inhibited; and

wherein the stimulation unit is actuated ~~characterised in that actuation is further effected in such a way~~ that the delivery of a ~~left atrial~~ stimulation pulse to the second atrium is suppressed ~~[[- if]]~~ when a ventricular sense event occurs during an upper tracking interval a-UTi operating mode in which the cardiac pacemaker works at a predetermined maximum stimulation rate.

3. (presently amended) ~~The A-biatrial triple-chamber cardiac pacemaker of claim 2, further comprising: as set forth in claim 1 or claim 2 comprising~~

a further sensing unit for sense events of the a second (left) atrium, wherein ~~of a heart characterised in that actuation is further effected in such a way~~ that the delivery of a ~~left atrial~~ stimulation pulse to the second atrium is suppressed when ~~[[if]]~~ the further sensing unit produces

a signal which is characteristic of a ~~left atrial~~ sense event (A_L -Sense) of the second atrium within the interatrial conduction time.

4. (presently amended) ~~The A-biatrial triple-chamber cardiac pacemaker of claim 3, wherein: as set forth in one of claims 1 through 3 characterised by a~~
the control unit which is adapted to calculate the time spacing from a latest secured ventricular event to a next planned ventricular stimulation pulse.

5. (presently amended) ~~The A-biatrial triple-chamber cardiac pacemaker of as set forth in claim 4, wherein: characterised by a~~
the control unit which is adapted to compare the calculated time spacing to a predeterminable maximum value.

6. (presently amended) ~~The A-biatrial triple-chamber cardiac pacemaker of as set forth in claim 5, wherein: characterised by a~~
the control unit which is adapted to switch off interatrial synchronisation in dependence on the comparison between the calculated time spacing and the predetermined maximum value.

7. (new) The pacemaker of claim 1, further comprising:
a further sensing unit for sense events of the second atrium, wherein the delivery of a stimulation pulse to the second atrium is suppressed when the further sensing unit produces a signal which is characteristic of a sense event (A_L -Sense) of the second atrium within the interatrial conduction time.

8. (new) The pacemaker of claim 1, wherein:
the control unit is adapted to calculate the time spacing from a latest secured ventricular event to a next planned ventricular stimulation pulse.

9. (new) The pacemaker of claim 7, wherein:
the control unit is adapted to calculate the time spacing from a latest secured ventricular event to a next planned ventricular stimulation pulse.

10. (new) The pacemaker of claim 2, wherein:
the control unit is adapted to calculate the time spacing from a latest secured ventricular event to a next planned ventricular stimulation pulse.
11. (new) The pacemaker of claim 8, wherein:
the control unit is adapted to compare the calculated time spacing to a predeterminable maximum value.
12. (new) The pacemaker of claim 9, wherein:
the control unit is adapted to compare the calculated time spacing to a predeterminable maximum value.
13. (new) The pacemaker of claim 10, wherein:
the control unit is adapted to compare the calculated time spacing to a predeterminable maximum value.
14. (new) The pacemaker of claim 11, wherein:
the control unit is adapted to switch off interatrial synchronisation in dependence on the comparison between the calculated time spacing and the predetermined maximum value.
15. (new) The pacemaker of claim 12, wherein:
the control unit is adapted to switch off interatrial synchronisation in dependence on the comparison between the calculated time spacing and the predetermined maximum value.
16. (new) The pacemaker of claim 13, wherein:
the control unit is adapted to switch off interatrial synchronisation in dependence on the comparison between the calculated time spacing and the predetermined maximum value.